Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 1. This sheet, which includes FIGS. 1 & 3, replaces the original sheet including FIGS. 1 & 3. In FIG. 1, the label --*Prior Art*-- has been added.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

Claims 1-20 remain in the application, all of which stand rejected.

1. Objection to the Drawings

The Examiner objects to the drawings because FIG. 1 does not include a --Prior Art-- label. Applicants have amended FIG. 1 to include such a label, and this rejection is now believed to be moot.

2. Rejection of Claims 1-3 and 7-17 Under 35 USC 102(b)

Claims 1-3 and 7-17 stand rejected under 35 USC 102(b) as being anticipated by Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter "Davidson").

With respect to claim 1, the Examiner asserts, in part, that Davidson discloses:

> . . .an integrated circuit comprising. . .
> a constant current source (power supply; Fig. 2) to provide a current I1;
> a thermal diode D1 that receives said current I1. . .;
> an analog to digital converter 36. . .

6/28/2005 Office Action, sec. 4, p. 2.

Applicants respectfully disagree. As clearly shown in FIG. 2, Davidson's power supply V_p is outside of the "ON-CHIP" area 12 (i.e., the power supply V_p is off-chip, and is not formed on the chip 12 that includes the thermal sensing diodes D_1 and D_2).

Davidson states:

> . . .A power supply V_p, external to the chip 12, and precision resistors R_1 and R_2, also external to the chip 12, provide two current sources I_1 and I_2, respectively, forward biasing the diodes D_1 and D_2.

Davidson, col. 2, lines 54-60.

Davidson's FIG. 3 even better illustrates the separation of the power supply V_p from the chip 12. FIG. 3 also shows that the analogue to digital converter 36 is not formed on the chip 12.

Davidson's temperature measurement system appears to be similar to the temperature measurement system disclosed in paragraphs [0016] and [0017] of applicants' specification. This system, however, is different than the system which is set forth in claim 1. Specifically, Davidson's system suffers from at least some degree of process variation, because the power supply V_p and ADC 36 are formed "off-chip". Further, Davidson's system requires the generation of two currents, and the measurement of two voltages, whereas the integrated circuit of applicants' claim 1 outputs a digital representation of a single "forward bias voltage", which single voltage measurement can be used to calculate a temperature as set forth in claim 2.

Claim 1 is believed to be allowable for at least the above reasons. Claims 2 and 3 are believed to be allowable, at least, because they depend from claim 1. Claim 7 is believed to be allowable, at least, because it too recites a constant current source that is on-chip. Claims 8-17 are believed to be allowable, at least, because they depend from claim 7.

3. Rejection of Claims 4 and 19 under 35 USC 103(a)

Claims 4 and 19 stand rejected under 35 USC 103(a) as being unpatentable over Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter referred to as "Davidson") in view of Vergis (U.S. Pat. No. 6,453,218 B1).

Claims 4 and 19 are believed to be allowable, at least, because they respectively depend from claims 1 and 7, and because Vergis does not teach that which is missing from Davidson. *See*, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claims 1 and 7.

4. Rejection of Claims 5 and 20 under 35 USC 103(a)

Claims 5 and 20 stand rejected under 35 USC 103(a) as being unpatentable over Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter referred to as "Davidson") in view of Thomson et al. (U.S. Pat. No. 6,554,469 B1; hereinafter referred to as "Thomson").

Claims 5 and 20 are believed to be allowable, at least, because they respectively depend from claims 1 and 7, and because Thomson does not teach that which is missing from Davidson. *See*, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claims 1 and 7.

5. Rejection of Claim 18 under 35 USC 103(a)

Claim 18 stands rejected under 35 USC 103(a) as being unpatentable over Davidson et al. (U.S. Pat. No. 5,639,163 A; hereinafter referred to as "Davidson") in view of Audy et al. (U.S. Pat. No. 5,195,827 A; hereinafter referred to as "Audy").

Claim 18 is believed to be allowable, at least, because it depends from claim 7, and because Audy does not teach that which is missing from Davidson. *See*, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claim 7.

6. Rejection of Claim 6 under 35 USC 103(a)

Claim 6 stands rejected under 35 USC 103(a) as being unpatentable over Tanaka (U.S. Pat. No. 6,890,097 B2) in view of Nishizawa et al. (U.S. Pat. No. 5,401,099 A; hereinafter referred to as "Nishizawa").

Claim 6 is believed to be allowable, at least, for reasons similar to why claim 1 is believed to be allowable, and because neither Tanaka nor Nishizawa teach that which is missing from Davidson (i.e., "during normal operation of the integrated

circuit, and ***on-board the integrated circuit, supplying a constant current*** to the thermal diode. . .; emphasis added; *see*, claim 6). *See*, Section 2 of these Remarks/Arguments, *supra*, for a discussion of what Davidson fails to teach with respect to claim 7.

7. Conclusion

In light of the above amendment and argument, applicants respectfully request the timely issuance of a Notice of Allowance.

Respectfully submitted,
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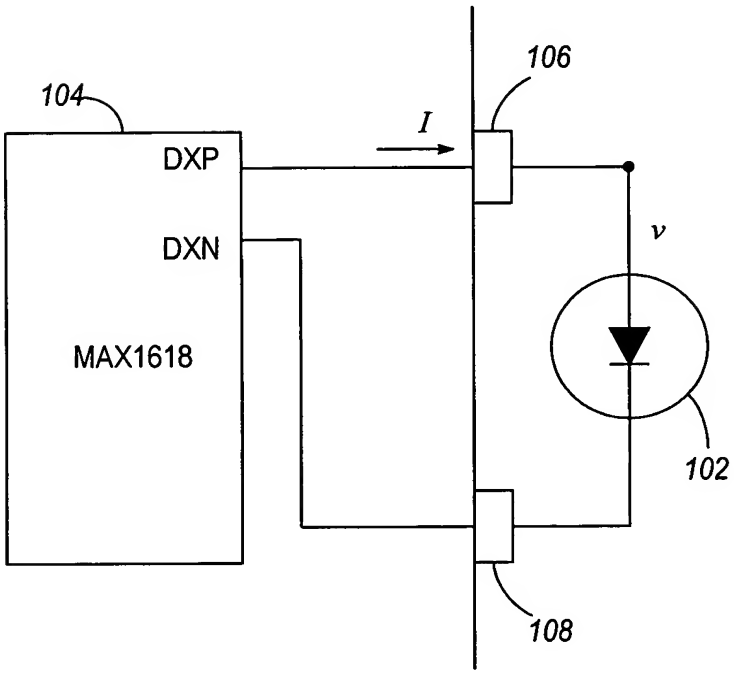

FIG. 1
Prior Art

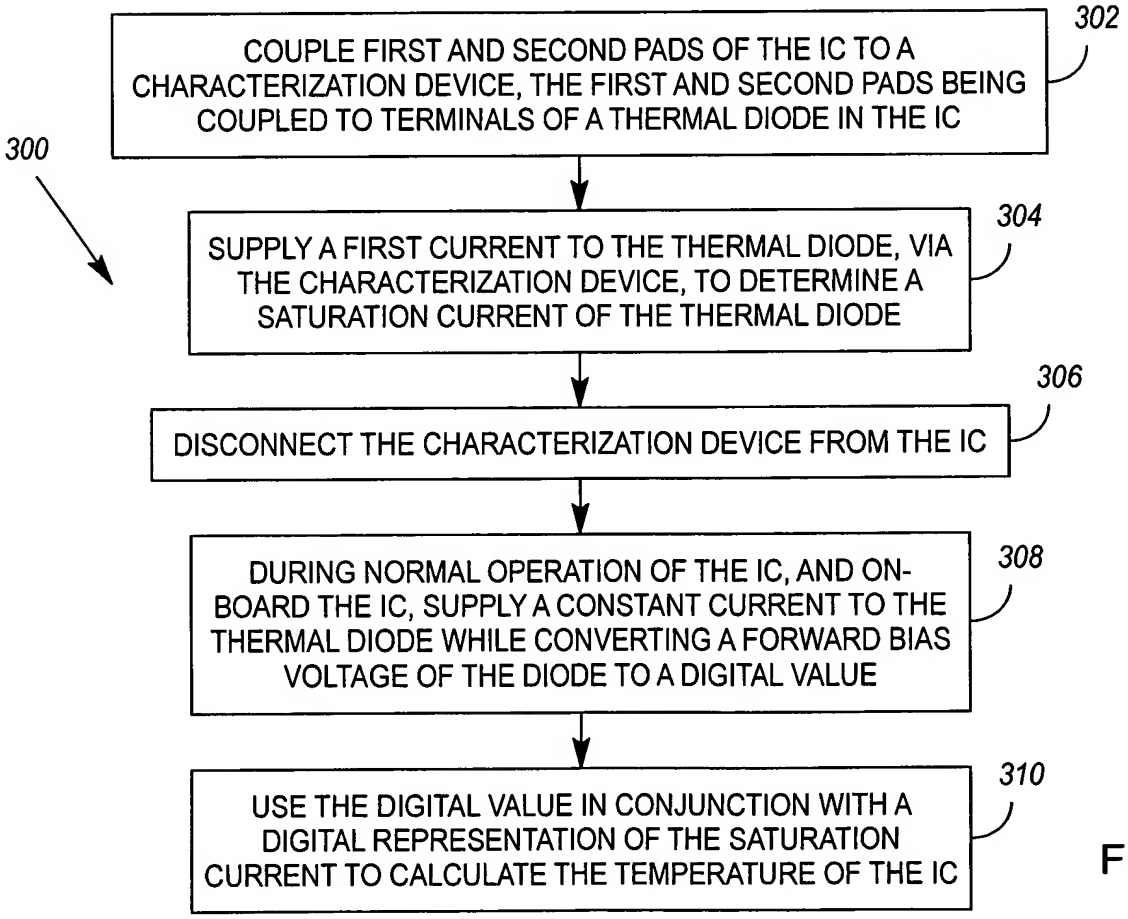

FIG. 3